REMARKS

The present Amendment is in response to the Examiner's Office Action mailed December 30, 2004. Claim 14 is cancelled and claims 1, 4, 11, 13, and 27 are amended. Claims 1-13 and 15-45 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicant requests that the Examiner carefully review any references discussed below to ensure that Applicant's understanding and discussion of the references, if any, is consistent with the Examiner's understanding. Also, Applicant's arguments related to each cited reference are not an admission that the cited references are, in fact, prior art.

A. Double Patenting Rejections

Claims 1-4, 7, 8, 12-15, 17, 27, 30 and 31 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5, 8, 9, 12, 13, 17, 19, 20, 23 and 26 of U.S. Patent No. 5,873,831 in view of U.S. Publication No. US2003/0004419 to Treado et al ("*Treado*").

Submitted herewith is a Terminal Disclaimer executed by Rajiv Kulkarni, Senior Licensing Manager of Assignee, The University of Utah Research Foundation, together with a Memorandum from The University of Utah Research Foundation granting Rajiv Kulkarni signatory power for Assignee. The Assignee hereby disclaims the terminal part of any patent granted on the above-identified application, which would extend beyond the expiration date of the full statutory term of said U.S. Patent No. 5,873,831 and hereby agrees that any patent so granted on the above-identified application shall be enforceable only for and during such period that the legal title to said patent shall be the same as the legal title to said U.S. Patent No. 5,873,831, this agreement to run with any patent granted on the above-identified application and to be binding upon the grantee, its successors or assigns.

The Assignee does not disclaim any terminal part of any patent granted on the above-identified application that would extend beyond the term of said U.S. Patent No. 5,873,831 in the event that said U.S. Patent No. 5,873,831 later: (a) expires for failure to pay a maintenance fee, is held unenforceable, is found invalid, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. § 1.321(a); (b) has all claims cancelled by a reexamination certificate; or (c) is otherwise terminated prior to the expiration of its statutory term as presently shortened by any terminal disclaimer, except for the separation of legal title stated above.

Claims 11, 23, 20, 22, 23, 27, 32-34, 37, 38, 39, 43 and 44 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 22, 26 and 28-32 of U.S. Patent No. 6,205,354 in view of *Treado*.

Submitted herewith is a Terminal Disclaimer executed by Rajiv Kulkarni, Senior Licensing Manager of Assignee, The University of Utah Research Foundation, together

with a Memorandum from The University of Utah Research Foundation granting Rajiv Kulkarni signatory power for Assignee. The Assignee hereby disclaims the terminal part of any patent granted on the above-identified application, which would extend beyond the expiration date of the full statutory term of said U.S. Patent No. 6,205,354 and hereby agrees that any patent so granted on the above-identified application shall be enforceable only for and during such period that the legal title to said patent shall be the same as the legal title to said U.S. Patent No. 6,205,354, this agreement to run with any patent granted on the above-identified application and to be binding upon the grantee, its successors or assigns.

The Assignee does not disclaim any terminal part of any patent granted on the above-identified application that would extend beyond the term of said U.S. Patent No. 6,205,354 in the event that said U.S. Patent No. 6,205,354 later: (a) expires for failure to pay a maintenance fee, is held unenforceable, is found invalid, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. § 1.321(a); (b) has all claims cancelled by a reexamination certificate; or (c) is otherwise terminated prior to the expiration of its statutory term as presently shortened by any terminal disclaimer, except for the separation of legal title stated above.

Accordingly, the prompt removal of the rejection of the foregoing claims under the judicially created doctrine of obviousness-type double patenting is respectfully requested.

B. Rejections Under 35 U.S.C. § 102(e)

Claims 1, 5, 6, 9-11, 13, 16-26, 27, 31, 35-45 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,690,966 to Rava et al. ("*Rava*"). Claims 1, 9-11, 13, 20, 25-27, 31, 35 and 39 are rejected under 35 U.S.C. 102(e) [1] as being anticipated by *Treado* et al. Because *Treado* does not teach or suggest each and every element of the rejected claims, Applicant respectfully traverses this rejection in view of the following remarks.

Present claims 1 and 11 recite, *inter alia*: "wherein the light directed onto the macular tissue of the eye has an intensity that does not destroy the macular tissue" and "wherein the light directed onto the biological tissue has an intensity that does not destroy the biological tissue." This language corresponds to language recited in previously pending claim 4. Applicant notes that previous claim 4 was not rejected by the Examiner under 35 U.S.C. § 102 or 103 and may therefore represent features of the invention the Examiner has acknowledged as containing patentable subject matter. Although this language is not the only language in previously pending claim 4, Applicant asserts that the recited features is not taught or disclosed by the cited prior art. In particular, neither of *Rava* and *Treado* contains any teaching or disclosure related to directing light onto biological tissue (as in claim 11), or onto macular tissue in an eye (as in claims 1, 5, 6, and 9-10) without damaging the tissue.

Present claims 13 and 27 recite, *inter alia*: "wherein the light source generates light at a wavelength that overlaps the absorption bands of the one or more carotenoids to be detected." This language corresponds to language recited in previously allowed claim

14. In direct contrast and as implicitly acknowledged by the Examiner in not rejecting claim 14 under 35 U.S.C. § 102 or 103, *Rava* and *Treado* have no teaching related to methods that use a light source generating light at a wavelength that overlaps the absorption bands of the one or more carotenoids to be detected.

Since *Rava* and *Treado* do not teach the methods and apparatuses being claimed in this application, Applicant respectfully requests that the foregoing rejections under 35 U.S.C. § 102(e) be withdrawn.

C. Rejections Under 35 U.S.C. § 103(a)

Claims 3, 15, 24, 35 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Treado* in view of U.S. Patent No. 5,348,018 to Alfano et al. ("*Alfano*"). Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rava* in view of U.S. Patent No. 4,832,483 to Verma ("*Verma*").

Claims 3, 15, 24, 28, 29, 35 and 45 depend from and contain the limitations of at least one of independent claims 1, 13, and 27. Accordingly, for at least the reasons presented above with respect to independent claims 1, 13, and 27, Applicant respectfully submits that 3, 15, 24, 35 and 45 are also patentable over the cited prior art. Applicant therefore respectfully requests the prompt removal of the rejections of claim 3, 15, 24, 28, 29, 35 and 45 under 35 U.S.C. 103(a).

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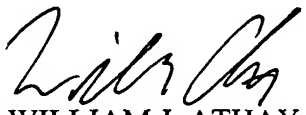
[1] Because *Treado* is only citable under 35 U.S.C. § 102(e), Applicant does not admit that *Treado* is in fact prior art to the claimed invention but reserve the right to swear behind *Treado* if necessary to remove it as a reference.

CONCLUSION

In view of the response and amendments submitted herein, Applicant respectfully submits that each of the pending claims is in condition for allowance. Therefore, reconsideration of the rejections is requested and allowance of those claims is respectfully solicited. In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that could be clarified in a telephonic interview, the Examiner is respectfully invited to initiate the same with the undersigned attorney.

Dated this 30th day of March, 2005.

Respectfully submitted,



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